UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,107	05/31/2006	Jurgen Schmidt	PD030121	5195

7590   04/21/2009

Joseph J Laks
Thomson Licensing Inc
Patent Operations
P O Box 5312
Princeton, NJ 08543-5312

EXAMINER
BLAIR, KILE O

ART UNIT	PAPER NUMBER
2614	

MAIL DATE	DELIVERY MODE
04/21/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/581,107	SCHMIDT ET AL.
Office Action Summary	Examiner	Art Unit
	Kile O. Blair	2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 February 2009*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-6 and 8-11* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-6 and 8-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

This Office action is in response to the communication filed 2/3/09. Claims 1, 3-6,

and 8-11.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

Claims 6 and 8-10 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

Claims 6 recites the limitation "separating parameters representing an impulse

response from an MPEG-4 bitstream storing the separated parameters in an additional

memory of a node" which renders the claim indefinite. The claim more simply recites

"separating parameters from a bitstream storing the separated parameters." The

parameters cannot be separated from a bitstream if the bitstream is storing the

parameters. Claims 8-10 are rejected for incorporating the errors of the claims from

which they depend.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by (E.D. Scheirer: "The MPEG-4 Structured Audio Standard" ACOUSTICS, SPEECH AND SIGNAL PROCESSING, 1998. PROCEEDINGS OF THE 1998 IEEE INTERNATIONAL CONFERENCE ON SEATTLE, WA. USA, 12-15 May 1998, vol. 6, pages 3801-3804-hereinafter as "IEEE", see IDS filed 5/31/06).

Regarding claim 1, IEEE teaches a method for coding impulse responses of audio signals (coding flat speech with a synthetic reverb, IEEE, pg. 3803, right hand column, ¶ 4), wherein said impulse responses allow the reproduction of sound signals corresponding to a certain room characteristic (impulse response that creates a particular reverberation effect, IEEE, pg. 3803, left hand column, ¶ 2), comprising: generating parameters representing an impulse response of a room for a sound source (coding flat speech with a synthetic reverb, IEEE, pg. 3803, right hand column, ¶ 4); and inserting said parameters into multiple successive MPEG-4 PROTO params fields (audio samples which are blocks of floating point data which make up a bit stream header; the bit stream contains several simple parameters for algorithmic modification, IEEE, pg. 3803, left hand column, ¶ 2), wherein a first params field contains information about the number and content of the following params fields (directions showing how they are to be configured for a particular synthesis session associated with header, IEEE, pg. 3803, left hand column, ¶ 2-3).

Regarding claim 6, IEEE teaches a method for decoding impulse responses of audio signals (coding flat speech with a synthetic reverb, IEEE, pg. 3803, right hand

column, ¶ 4; and decoding of bit stream, IEEE, pg. 3802, right hand column, ¶ 3),

wherein said impulse responses allow the reproduction of sound signals corresponding

to a certain room characteristic (impulse response that creates a particular

reverberation effect, IEEE, pg. 3803, left hand column, ¶ 2), comprising: separating

parameters representing an impulse response from an MPEG-4 bitstream storing the

separated parameters in an additional memory of a node (a block of sample data might

contain an impulse response, IEEE, pg. 3803, left hand column, ¶ 2, where the block of

sample data containing the impulse response is separate from the header, IEEE, pg.

3803, left hand column, ¶ 3); and using said stored parameters for the calculation of the

room characteristic (impulse response that creates a particular reverberation effect,

IEEE, pg. 3803, left hand column, ¶ 2); and separating said parameters from multiple

successive MPEG-4 PROTO params fields, wherein a first params field contains

information about the number and content of the following params fields (a block of

sample data might contain an impulse response, IEEE, pg. 3803, left hand column, ¶ 2,

where the block of sample data containing the impulse response is separate from the

header, IEEE, pg. 3803, left hand column, ¶ 3).

Claim 11 is substantially similar to claim 1 and is rejected for the same reasons

since there must be an apparatus or computer program embodied on a computer

readable medium to carry out the method as disclosed by IEEE in claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over

IEEE in view of (Koenen, Rob. Coding of Moving Pictures and Audio: MPEG-4

Overview (V.21 - Jeju Version). Rep. No. ISO/IEC JTC1/SC29/WG11 N4668.,

International Organization for Standardization. 2002. 1-79, hereinafter as "Koenen", see

PTO-892 mailed 10/3/08).

Regarding claim 3, IEEE teaches the method according to claim 1.

Although IEEE does not explicitly teach the feature wherein a scalable

transmission of the room impulse responses is enabled, Koenen teaches that MPEG-4

coding can be used to create reverb using scalability (Koenen, pg. 64, §12, ¶ 2). It

would have been obvious to use the scalability as disclosed by Koenen in the method of

IEEE since using known features of an industry standard to implement the reverberation

disclosed by IEEE would have yielded predictable results.

Regarding claim 8, IEEE teaches the method according to claim 6.

Although IEEE does not explicitly teach the feature wherein the room impulse

responses are received following a scalable transmission of said room impulse

responses, Koenen teaches that MPEG-4 coding can be used to create reverb using

scalability (Koenen, pg. 64, §12, ¶ 2). It would have been obvious to use the scalability

as disclosed by Koenen in the method of IEEE since using known features of an

industry standard to implement the reverberation disclosed by IEEE would have yielded

predictable results.

Claims 4, 5, 9, and 10 are rejected under 35 U.S.C. 103(a) as being

unpatentable over IEEE in view of Koenen in further view of (Scheirer, Eric D.

"Structured audio and effects processing in the MPEG-4 multimedia standard."

MULTIMEDIA SYSTEMS 7 (1999): 11-22, hereinafter as "Multimedia Systems", see

PTO-892 mailed 10/3/08).

Regarding claim 4, IEEE in view of Koenen teaches the method according to

claim 3.

Although IEEE in view of Koenen does not explicitly teach the feature wherein in

a broadcast mode short versions of room impulse responses are frequently transmitted

and a long sequence is less frequently transmitted, Multimedia Systems teaches that, in

an MPEG-4 coder, a scene in a large hall will have reverb added, somewhat less reverb

added to dialog, and no reverb added to the music based on the needs of the scene

(Multimedia Systems, pg. 16, §3.1, ¶ 2- pg. 17, §3.1, ¶ 2). It would have been obvious to

one of ordinary skill in the art to transmit the shorter version of impulse responses more

frequently with the motivation of conserving transmission capacity as is done with

transmission of few parameters sufficient enough to reproduce the scene as disclosed

(Multimedia Systems, pg. 13, §2.3.2, ¶ 1-4).

Regarding claim 5, IEEE in view of Koenen teaches the method according to claim 3.

Although IEEE in view of Koenen does not explicitly teach the feature wherein in an interleaved mode a first part of the room impulse responses is frequently transmitted and the later part of the room impulse responses is less frequently transmitted, Multimedia Systems discloses the interleaving mode of transmitting the timbre of a piano frequently when redundancies exist (Multimedia Systems, pg. 13, §2.3.2, ¶ 1-4). It would have been obvious to one of ordinary skill in the art to apply the same mode to the reverberation effects with the motivation of conserving transmission capacity (Multimedia Systems, pg. 11, §1, ¶ 3- pg. 12, §1, ¶ 3) since Multimedia Systems discloses that the same tool are used for effects processing as the music reproduction (Multimedia Systems, pg. 13, §2.3.2, ¶ 4).

Regarding claim 9, IEEE in view of Koenen teaches the method according to claim 8.

Although IEEE in view of Koenen does not explicitly teach the feature wherein in a broadcast mode short versions of room impulse responses are frequently received and a long sequence is less frequently received, Multimedia Systems teaches that, in an MPEG-4 coder, a scene in a large hall will have reverb added, somewhat less reverb added to dialog, and no reverb added to the music based on the needs of the scene (Multimedia Systems, pg. 16, §3.1, ¶ 2- pg. 17, §3.1, ¶ 2). It would have been obvious to one of ordinary skill in the art to transmit the shorter version of impulse responses more frequently with the motivation of conserving transmission capacity as is done with

transmission of few parameters sufficient enough to reproduce the scene as disclosed (Multimedia Systems, pg. 13, §2.3.2, ¶ 1-4).

Regarding claim 10, IEEE in view of Koenen teaches the method according to claim 8.

Although IEEE in view of Koenen does not explicitly teach the method according to claim 8, wherein in an interleaved mode a first part of the room impulse responses is frequently received and the later part of the room impulse responses is less frequently received, Multimedia Systems discloses the interleaving mode of transmitting the timbre of a piano frequently when redundancies exist (Multimedia Systems, pg. 13, §2.3.2, ¶ 1-4). It would have been obvious to one of ordinary skill in the art to apply the same mode to the reverberation effects with the motivation of conserving transmission capacity (Multimedia Systems, pg. 11, §1, ¶ 3- pg. 12, §1, ¶ 3) since Multimedia Systems discloses that the same tool are used for effects processing as the music reproduction (Multimedia Systems, pg. 13, §2.3.2, ¶ 4).

Response to Arguments

Applicant's arguments filed 2/3/09 have been fully considered but they are not persuasive.

Applicant argues that IEE does not teach "generating parameters respresenting an impulse response", however the examiner points out that IEEE does teach sample data including impulse response parameters (IEEE, pg. 3803, left hand column, ¶ 2).

Applicant argues that IEE does not teach "inserting said parameters into multiple successive MPEG-4 PROTO-params fields, wherein a first params field contains information about the number and content of the following params fields", however the examiner points out that IEEE teaches a header (IEEE, pg. 3803, left hand column, ¶ 2) and directions showing how they are to be configured for a particular synthesis session where it is understood that the header includes such information since the header is "used to reconfigure the synthesis engine" (IEEE, pg. 3803, left hand column, ¶ 3).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kile O. Blair whose telephone number is (571) 270-3544. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571) 272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KB

/Vivian Chin/
Supervisory Patent Examiner, Art Unit 2614